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10/534,436	12/13/2005	Satoshi Takamori	04473/003001	4509

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EXAMINER

FERGUSON, MICHAEL P

ART UNIT	PAPER NUMBER
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3679

NOTIFICATION DATE	DELIVERY MODE
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11/06/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com
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Office Action Summary

Application No.

10/534,436

Applicant(s)

TAKAMORI ET AL.

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/16/05</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to because of the following:

The listed description of the reference numerals within each of Figures 1-25 should be deleted.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Figures 26 and 27 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

5. Claims 1-15 are objected to because of the following informalities:

Claim 1 (line 2) recites "to be closed, and, from". It should recite --when in a closed position, and from--.

Claim 1 (lines 3-4) recites "they are superposed as such, and is stopped at the 180-degree rotated open position". It should recite --the cover and the main body are superposed and stopped at a 180-degree rotational position when in an open position--.

Claim 1 (line 8) recites "at the other position". It should recite --at another position--.

Claim 1 (line 9) recites "180-degree". It should recite --180 degrees--.

Claim 1 (line 12) recites "as that connecting". It should recite --as that of a line connecting--.

Claim 1 (line 14) recites "180-degree". It should recite --180 degrees--.

Claim 1 (line 15) recites "a pressing load applied to, and". It should recite --wherein a pressing load is applied to the cam surface, --.

Claim 1 (line 17) recites "is fitted". It should recite --engages--.

Claim 1 (line 18) recites "while, the". It should recite --wherein the--.

Claim 1 (line 19) recites "being reduced". It should recite --is reduced--.

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Claim (line 22) recites "is fitted". It should recite --engages--.

Claim 1 (line 23) recites "wherein". It should recite --wherein: --.

Claim 2 (line 3) recites "is fitted". It should recite --engages--.

Claim 3 (line 4) recites "is fitted". It should recite --engages--.

Claim 3 (line 6) recites "is fitted". It should recite --engages--.

Claim 4 (line 2) recites "direction of". It should recite --direction--.

Claim 4 (line 3) recites "that connecting". It should recite --that of a line connection--.

Claim 4 (line 6) recites "on a pressing force that it". It should recite --on the pressing force that the following member--.

Claim 5 (line 2) recites "direction of". It should recite --direction--.

Claim 5 (line 3) recites "that connecting". It should recite --that of a line connection--.

Claim 6 (line 6) recites "where the". It should recite --wherein the--.

Claim 7 (line 5) recites "support them". It should recite --support the main body and the cover--.

Claim 8 (line 3) recites "bosses as the". It should recite --protruding bosses comprising the--.

Claim 9 (line 2) recites "in the swing". It should recite --comprising the swing--.

Claim 9 (line 3) recites "are dotted, and positions of these". It should recite --are formed in dotted locations, and positions of--.

Claim 9 (line 4) recites "as their". It should recite --as a--.

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Claim 10 (line 2) recites "opposed at the". It should recite --opposed in the--.

Claim 10 (lines 4-5) recites "extended straight, of a tip end side... portion of the main body and the cover, bosses". It should recite --extended in a straight line, the main body and the cover comprise a tip end side... portion, bosses--.

Claim 10 (line 6) recites "portion thereof". It should recite --portions thereof--.

Claim 11 (line 2) recites "wherein, in the pressing means, an". It should recite --wherein the pressing means comprises an--.

Claim 11 (line 5) recites "both of contact". It should recite --both contact--.

Claim 11 (lines 6-7) recites "inclined from each other, is provided on both sides in the widthwise". It should recite --inclined, wherein the inclined guide portion is provided on both sides of the pressing means in a widthwise--.

Claim 12 (line 2) recites "both sides in". It should recite --both sides of the pressing means in--.

Claim 13 (line 1) recites "using a". It should recite --comprising a--.

Claim 14 (line 1) recites "in the swing". It should recite --comprising the swing--.

Claim 14 (lines 2-3) recites "are dotted, and positions of these". It should recite --are formed in dotted locations, and positions of--.

Claim 14 (line 4) recites "as their". It should recite --as a--.

Claim 15 (line 2) recites "opposed at the". It should recite --opposed in the--.

Claim 15 (lines 4-5) recites "extended straight, of a tip end side... portion of the main body and the cover, bosses". It should recite --extended in a straight line, the main body and the cover comprise a tip end side... portion, bosses--.

Claim 15 (line 5) recites "portion thereof". It should recite --portions thereof--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 (lines 11-14) recite "a pressing means, which presses the cam surface of the eccentric cam by setting a pressing direction to the same direction as that connecting both of the portion corresponding to the closed position and the portion corresponding to the open position". Examiner notes that the direction of the line connecting the closed position portion and the open position portion changes in angle as the eccentric cam rotates. It is unclear as what direction the pressing means press on the cam since the direction of such line varies with the rotation of the cam. It is unclear as to how the pressing direction of the pressing means may vary as set forth in claim 1. Accordingly, one is unable to determine the metes and bounds of such claim. Claims 1-15 depend from claim 1 and are likewise rejected.

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Claim 1 (lines 1-4) recites "A rotational supporting mechanism, in which a main body and a cover are... open position, the rotational supporting mechanism comprising: ". It is unclear as to whether claim 1 recites a main body and a cover as only intended use with the claimed supporting mechanism, or whether the main body and the cover are positively recited as claimed elements of the supporting mechanism. Accordingly, one is unable to determine the metes and bounds of such claim.

For the purpose of examining the application, it is assumed that applicant has intended to positively recite the main body and the cover as elements of the claimed supporting mechanism in claim 1.

Claim 4 (lines 2-5) recite "a pressing direction of which is set to the same direction as that connecting both of the portions corresponding to the closed and open positions". Examiner notes that the direction of the line connecting the closed position portion and the open position portion changes in angle as the eccentric cam rotates. Accordingly, it is unclear as what direction the pressing means press on the cam since the direction of such line varies with the rotation of the cam.

Claim 5 (lines 2-5) recite "a pressing direction of which is set to the same direction as that connecting both of the portions corresponding to the closed and open positions". Examiner notes that the direction of the line connecting the closed position portion and the open position portion changes in angle as the eccentric cam rotates. Accordingly, it is unclear as what direction the pressing means press on the cam since the direction of such line varies with the rotation of the cam.

Claim 6 (lines 6-8) recites "position control portions for controlling excess rotation of the interlocking piece, where the interlocking piece... would rotate beyond the portion corresponding to the open position of the eccentric cam". It is unclear as to how the interlocking piece can rotate beyond the open position portion since the rotation of the interlocking piece is limited by the position control portions.

9. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships which render the claim incomplete are as follows:

Claim 6 fails to clearly recite the structural cooperative relationship between each of the interlocking piece, the rotation disc and the position control portions, respectively, to the eccentric cam. It is unclear as to how the interlocking piece, the rotation disc and the position control portions structurally and functionally interact with the eccentric cam in order to control rotation between the main body and the cover.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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11. Claims 1-4, 7, 8 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Godston et al. (US 7,231,188).

As to claim 1, Godston et al disclose a rotational supporting mechanism, in which a main body **220** and a cover **120** are superposed when in a closed position, and from the closed position, the cover is rotated 180 degrees in a planar direction in which the cover and the main body are superposed and stopped at a 180-degree rotational position when in an open position, the rotational supporting mechanism comprising:

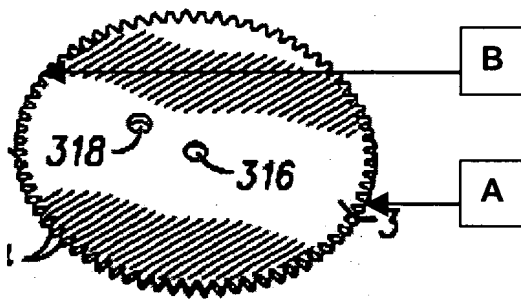
an eccentric cam **318,310** rotating eccentrically with respect to the planar direction, the eccentric cam having a portion **A** (Figure 3 reprinted below with annotations) corresponding to the closed position at one rotational position with maximum eccentricity on a cam surface (maximum eccentricity being defined by a maximum distance from camming point **318**) and a portion **B** corresponding to the open position at another position with minimum eccentricity on the cam surface (minimum eccentricity being defined by a minimum distance from camming point **318**), the positions being 180 degrees opposite to each other; and

a pressing means **140,320,330**, which presses the cam surface of the eccentric cam by setting a pressing direction to the same direction as that of a line connecting both of the portion corresponding to the closed position and the portion corresponding to the open position, the portions being 180 degrees opposite to each other through the axis of the eccentric cam, wherein a pressing load is applied to the cam surface, rotation control over the eccentric cam being increased to stop rotational movement of the eccentric cam when the pressing means engages the portion corresponding to the

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closed position on the cam surface, wherein the pressing load applied to the eccentric cam is reduced as the pressing means approaches a side of the portion corresponding to the open position, the rotation control over the eccentric cam being increased to stop the rotational movement of the eccentric cam when the pressing means engages the position corresponding to the open position, wherein:

one of the eccentric cam and pressing means is attached to the main body, while the other of the eccentric cam and pressing means is attached to the cover so that the cover is rotationally supported (Figures 2-6).



As to claim 2, Godston et al. disclose a mechanism wherein, when the portion **B** corresponding to the open position on the cam surface of the eccentric cam **318,310** engages the pressing means **140,320,330**, a control means **129** for controlling excessive rotation beyond the position corresponding to the open position in the same direction as that in which the eccentric cam is rotated 180 degrees to the open direction is provided (Figures 3-5).

As to claim 3, Godston et al. disclose a mechanism wherein the eccentric cam **318,310** has a recess (defined between adjacent teeth **314**) corresponding to the closed position at one point **A** with maximum eccentricity on the eccentrically rotating cam surface, to which a protruding portion **142** of the pressing means **140,320,330** engages,

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and has a recess (defined between adjacent teeth **314**) corresponding to the open position at one point **B** with minimum eccentricity, to which the protruding portion **144** of the pressing means engages (Figures 3-6).

As to claim 4, Godston et al. disclose a mechanism wherein the pressing means **140,320,330** is equipped with an elastic member **320**, a pressing direction which is set to the same direction as that of a line connecting both of the portions corresponding to the closed and open positions, which are determined through the axis of the eccentric cam **318,310**, the portions being 180-degree opposite to each other, and a following member **330** moving back and forth in the pressing direction, based on a pressing force that it receives from the elastic member, to follow along the cam surface of the eccentric cam (Figures 3-5).

As to claim 7, Godston et al. disclose a mechanism wherein swing preventing portions **122,222** (protruding bosses are defined by protruding flanges **122,222**) for preventing the cover **120** from staggering are provided on opposite and superposed surfaces of the main body **220** and the cover in proximity of an axially supporting portion that joins both of the main body and the cover in the direction of superposition to axially support the main body and the cover (Figure 6).

As to claim 8, Godston et al. disclose a mechanism wherein, when the cover **120** is rotated 180 degrees to be located at the open position from the closed position, protruding bosses **122,222** comprising the swing preventing portions are formed on the opposite and superposed surfaces of the cover **120** and the main body **220** in a manner

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such that the protruding bosses on both the opposite surfaces are butted against each other (Figure 6).

As to claim 10, Godston et al. disclose a mechanism wherein the main body **220** and the cover **120** are superposed and opposed in the closed position, and when the eccentric cam **318,310** is turned 180 degrees with its axis as the center so that the main body and the cover are extended in a straight line, the main body and the cover comprise a tip end side portion and a basal end side portion, bosses **122,222** are formed at positions on the basal end side portions thereof (Figure 6).

As to claim 11, Godston et al. disclose a mechanism wherein the pressing means **140,320,330** comprises an inclined guide portion **334,338**, in which a base **124** is placed on an upper surface of the main body (column 10 lines 57-64), a pressing piece **330**, which is urged toward the base by pressing springs **320,322,324**, is pressed against the side of the eccentric cam **318,310** and guided in a sliding manner so as to go back and forth freely, and both contact guide portions of the pressing piece and the base are inclined, wherein the inclined guide portion is provided on both sides of the pressing means in a widthwise direction of the pressing piece (Figure 3).

As to claim 12, Godston et al. disclose a mechanism wherein the pressing means **140,320,330** has the inclined guide portion **334,338** on both sides of the pressing means in the widthwise direction of the pressing piece **330**, and a central sliding guide portion formed of an axis portion provided at a central portion in the widthwise direction of the pressing piece and a sliding guide groove **129** formed on the base **124**, a concave portion of which is fitted to the axis portion along the sliding direction (Figure 3).

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As to claim 13, Godston et al. disclose a mobile terminal 100 comprising a rotational supporting mechanism (Figure 2).

Allowable Subject Matter

12. Claims 5, 6, 9, 14 and 15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

13. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 5, Godston et al. disclose the claimed rotational supporting mechanism with the exception of wherein the pressing means is equipped with a pressing roller axially supported on the pressing piece in a manner so as to be freely rotatable, and pressing against the cam surface of the eccentric cam integrally with the pressing piece by receiving the pressing force of the pressing spring.

As to claim 6, Godston et al. disclose the claimed rotational supporting mechanism with the exception of wherein the control means is provided with a rotation disc that rotates left or right in the planar direction, an interlocking piece that rotates with the rotation disc in the same rotational direction by receiving the rotational force of the rotation disc, and position control portions for controlling excess rotation of the interlocking piece, wherein the interlocking piece, which rotates left or right with the rotation disc, would rotate beyond the portion corresponding to the open position of the eccentric cam.

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As to claim 9, Godston et al. disclose the claimed rotational supporting mechanism with the exception of wherein, comprising the swing preventing portions, a plurality of butting portions of the bosses are formed in dotted locations, and positions of respective butting portions are dotted in a manner so as to have different radial distances from an axis of the eccentric cam as a center, and so as not to be present concentrically.

As to claim 14, Godston et al. disclose the claimed rotational supporting mechanism with the exception of wherein, comprising the swing preventing portions, a plurality of butting portions of the bosses are formed in dotted locations, and positions of respective butting portions are dotted in a manner so as to have different radial distances from an axis of the eccentric cam as a center, and so as not to be present concentrically.

There is no teaching or suggestion, absent the applicants' own disclosure, for one having ordinary skill in the art at the time the invention was made to modify the mechanism disclosed by Godston et al. to have the above mentioned elemental features.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patents show the state of the art with respect to rotational support mechanisms:

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Harmon et al. (US 7,142,667), Harmon (US 6,856,792), Gray (US 5,485,517) and Magi (US 3,583,734) are cited for pertaining to mechanisms comprising rotational joints automated and/or locked by spring-biased pressing means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPF

10/26/07



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